PATENT ABSTRACTS OF JAPAN

(11)Publication number :   2001-190620

(43)Date of publication of application : 17.07.2001

(51)Int.CI.	A61H 7/00
	A61H 15/00

(21)Application number : 2000-007101

(71)Applicant : MATSUSHITA ELECTRIC WORKS LTD
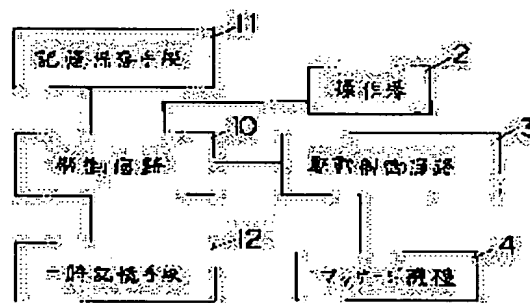
(22)Date of filing :   14.01.2000

(72)Inventor : NISHIO FUMIHIRO
SARUTA MASAFUMI
INNAMI TERUHISA
KITAGAWA MASAO
HAMANO MASUYUKI
OWA MASATOSHI
FUKUTANI MAKOTO
MATSUMOTO KOJI

(54) MASSAGE MACHINE

(57)Abstract:
PROBLEM TO BE SOLVED: To make course massage utilizing an automatic treating function favorite.
SOLUTION: A massage machine has an automatic treating function successively carrying out massage operation according to a preset program. This massage machine has a speed altering switch for changing a speed in all of massage operations and, if the speed altering switch is operated, the alteration of a speed becomes effective with respect to all of massage operations of automatic treatment.

LEGAL STATUS

[Date of request for examination]   25.08.2003

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

THIS PAGE BLANK (USPTO)

[Number of appeal against examiner's decision
of rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]

THIS PAGE BLANK (USPTO)

[Claim(s)]

[Claim 1] automatic [which carries out sequential execution of the massage actuation in the procedure according to the program set up beforehand] —— free medical treatment —— the massage machine characterized by having the rate alteration switch to which the rate about all massage actuation is changed in a massage machine with a function.

[Claim 2] automatic [which carries out sequential execution of the massage actuation in the procedure according to the program set up beforehand] —— free medical treatment —— the massage machine characterized by having the alteration switch in a massage machine with a function whenever [strength / which changes whenever / strength / about all massage actuation].

[Claim 3] The massage machine according to claim 2 characterized by having the rate alteration switch to which the rate about all massage actuation is changed.

[Claim 4] A massage machine given in one term of claims 1-3 characterized by having a temporary storage means to memorize a rate modification value or the modification value of whenever [strength] until after massage actuation termination.

[Claim 5] the modification value memorized for the temporary storage means —— automatic [new to origin] —— free medical treatment —— the massage machine according to claim 4 characterized by having a storage preservation means to generate and memorize a course.

[Claim 6] The massage machine according to claim 5 characterized by having a display means to display the completion of storage to a storage preservation means.

[Claim 7] automatic [which carries out sequential execution of the massage actuation which includes a beat massage in a procedure according to the program set up beforehand] —— free medical treatment —— the massage machine characterized by having the alteration switch which changes beat massage actuation into massage actuation of other type in a massage machine with a function.

[Claim 8] automatic [carry out / according to the program set up beforehand / by the procedure / in rolling massage actuation / sequential execution] —— free medical treatment —— the massage machine characterized by having the repeat directions switch on which repeat actuation of the massage actuation including rolling massage actuation is made to perform in a massage machine with a function.

[Claim 9] all massage actuation including repeat actuation —— automatic [new to

origin] ―― free medical treatment ―― the massage machine according to claim 8 characterized by having a storage preservation means to generate and memorize a course.

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] this invention ―― automatic ―― free medical treatment ―― it is related with a massage machine equipped with the function.
[0002]
[Description of the Prior Art] automatic [which carries out sequential execution of the massage actuation from which plurality differs in the procedure according to the program set up beforehand] ―― free medical treatment ―― although there is a massage machine equipped with the function ―― automatic [this kind of] ―― free medical treatment ―― in the thing equipped with the function, the program currently prepared beforehand is not a thing for everybody, and necessarily suits neither liking of a user individual nor the symptom of stiffness. for this reason, automatic [conventional] ―― free medical treatment ―― a massage machine with a function ―― also setting ―― automatic ―― free medical treatment, if a strength adjustment switch and a speed-regulation switch are operated when performing the course massage using a function Although strength adjustment about the massage actuation under activation and speed regulation can be performed now Only this adjustment of the massage actuation under activation is effective, and if it shifts to massage actuation of the next step under course massage, it will return to whenever [strength / which has been set up beforehand], and a rate.
[0003]
[Problem(s) to be Solved by the Invention] in this case ―― for example, too generally, strong in a stimulus, since a massage strong and quicker than liking is made, when actuation of strength adjustment or speed regulation must be performed whenever massage actuation shifts, and carrying out to the man of liking [a weak and late massage] especially for the man of liking [a strong and quick massage], and the man of liking [a conversely weak and late massage] and massage actuation shifts.
[0004] the place which this invention is made in view of such a point, and is made into the purpose ―― automatic ―― free medical treatment ―― it is in offering the massage machine which can perform easily making the course massage using a function into a

favorite thing.

[0005]

[Means for Solving the Problem] In a massage machine with a function automatic [which carries out sequential execution of the massage actuation in the procedure according to the program to which a deer is carried out and this invention is set beforehand] -- free medical treatment -- It has the 1st description to have the rate alteration switch to which the rate about all massage actuation is changed. moreover, automatic [which carries out sequential execution of the massage actuation in the procedure according to the program set up beforehand] -- free medical treatment -- in the massage machine with a function, it has the 2nd description to have the alteration switch whenever [strength / which changes whenever / strength / about all massage actuation].

[0006] If an alteration switch is operated whenever [rate alteration-switch or strength], since modification becomes effective whenever [rate modification or strength], actuation of an alteration switch is good at once about all massage actuation of automatic free medical treatment.

[0007] and the modification value which should be equipped with a temporary-storage means memorize a rate modification value or the modification value of whenever [strength] until after massage actuation termination, and was further memorized for the temporary-storage means -- automatic [new to origin] -- free medical treatment -- if it has a storage preservation means generate and memorize a course, the course massage which consists of favorite massage actuation of a user can register. At this time, it is desirable to have had a display means to display the completion of storage to a storage preservation means.

[0008] moreover, automatic [which carries out sequential execution of the massage actuation which includes a beat massage in a procedure according to the program to which this invention is set beforehand] -- free medical treatment -- in the massage machine with a function, it has the 3rd description to have the alteration switch which changes beat massage actuation into massage actuation of other type. the case where beat massage actuation is not liked -- massage actuation of other type -- replacing -- automatic -- free medical treatment can be received.

[0009] automatic [which furthermore carries out sequential execution of the rolling massage actuation in the procedure according to the program to which this invention is set beforehand] -- free medical treatment -- in the massage machine with a function, it has the 4th description for having the repeat directions switch on which repeat actuation of the massage actuation including rolling massage actuation is made

to perform. automatic [which can receive many favorite massage actuation] -- free medical treatment can be received.

[0010] also in this case, all massage actuation including repeat actuation -- automatic [new to origin] -- free medical treatment -- if it should have a storage preservation means to generate and memorize a course, the course massage which consists of favorite massage actuation of a user can be registered.

[0011]

[Embodiment of the Invention] If this invention is explained in full detail based on an example of the gestalt of operation below, about the structural configuration of a massage machine, like [although what kind of thing may be used] the massage device shown, for example in JP,1-49496,B etc. Can rub in the location of arbitration, such as ****** on the tooth back of the body, and a shoulder, the waist, can give a massage and a beat massage upwards, and free medical treatment -- the condition of having contacted the child on the body -- free medical treatment, while being able to give the rolling massage (flush massage) to which a child is moved along with the body While adjustment of whenever [strength] is possible about each massage, modification of a massage working speed should be just possible at modification of the motor rate by duty ratio control etc.

[0012] and automatic -- free medical treatment -- whenever [class / of massage actuation /, active-position, and strength], the table which arranged a parameter called a rate in order of the step can be memorized for storage preservation means, such as EEPROM, the control circuit which consists of a microcomputer etc. can read the above-mentioned table in order of a step, and a function can obtain it by making a massage device perform actuation according to the parameter.

[0013] When the switch which directs an automatic course massage is operated with an actuation vessel in here, it sets to this invention. The above-mentioned whole table is transmitted from the above-mentioned storage preservation means on the temporary storage means which once consists of RAM. If move a pointer to the 1st step of the table on a temporary storage means, massage actuation of the 1st step is made to carry out to a massage device and this massage actuation is completed A pointer is moved to the 2nd step and sequential execution of the massage actuation of each step is carried out by making massage actuation of the 2nd step carry out to a massage device.

[0014] and the above-mentioned control circuit "is already **" -- or -- "-- slowly -- " -- if a rate alteration switch is operated, the rate parameter of all the steps (or the step and the step after it which are performed when a rate alteration switch is

pushed) in the table on a temporary storage means will be written and changed. [which was prepared during activation of the above-mentioned automatic course massage at the actuation machine] if the rate alteration switch of "being already **" was pushed -- a rate parameter -- plus 1 -- carrying out -- "-- slowly -- " -- if a rate alteration switch is operated, a rate parameter will be considered as minus 1 or minus 2.

[0015] Since the rate of the massage actuation performed is determined by the value of the rate parameter on a table, all massage actuation performed from the time of a rate alteration switch being operated later will be made at the changed rate.

[0016] Moreover, if an alteration switch is operated whenever [strength / which was similarly prepared in the actuation machine as for whenever / strength / of massage actuation] It rewrites to the value according to that actuation. an alteration switch strengthens [whenever / strength / of all the steps (or the step and the step after it which are performed when an alteration switch is pushed whenever / strength /) in the table on a temporary storage means] a parameter more whenever [strength] -- making it delicate -- It is made to perform by whenever [strength / by which subsequent massage actuation was changed].

[0017] But it is good to include the directions bit of which parameter to choose, while setting beforehand the parameter according to whenever [strength / of a three-stage] as each step in a table, since it may be difficult to set up whenever [suitable strength / for each massage actuation] for a parameter simply because it takes [plus 1 or] minus 1 about whenever [strength], and to be made to perform rewriting by actuation of an alteration switch about the directions bit whenever [strength].

[0018] furthermore, an automatic course massage -- the time of a user not liking a beat massage in what includes beat massage actuation working -- automatic -- free medical treatment, although it becomes pain to receive the massage using a function In order to cope with this point, the switch of "beat nothing" is formed in the actuation machine. When the switch which chooses automatic course massage actuation after actuation of the switch of "beat nothing" is operated after making automatic course massage actuation start or the step about the beat massage actuation on the table transmitted on the temporary storage means from the storage preservation means -- all -- other massage actuation -- for example, it is good to rub and to make it permute by massage actuation. The automatic course massage actuation which does not include beat massage actuation can be obtained.

[0019] Furthermore, although he sometimes often wants to extend the time amount

by which the massage actuation is made when comfortable massage actuation is during automatic course massage actuation If the switch which directs a "repeat" in an actuation vessel is formed and this switch is operated in order to cope with this point The thing of the same contents as the step applicable to the massage actuation under current activation on the table transmitted on the temporary storage means from the storage preservation means is inserted between the following steps. When massage actuation of the present step is completed, or when the above-mentioned switch is pushed, it is good for a pointer to move to the above-mentioned insertion step, and for massage actuation of this insertion step to be made to be performed.

[0020] And although the table on a temporary storage means becomes what was rewritten according to actuation of an alteration switch, a "beat nothing" switch, or a "repeat" switch whenever [rate alteration-switch or strength] If this rewritten table is held on the temporary storage means even when automatic course massage actuation is completed, and the switch of "registration" prepared in the actuation machine is pushed While the transfer storage of the table on which the above-mentioned modification was added is made to be carried out at a storage preservation means like EEPROM, when the switch of the "memory course" formed in the actuation machine is pushed A user can get favorite massage actuation from a storage preservation means certainly by the table rewritten the account of a top being transmitted on a temporary storage means, and the automatic course massage actuation based on this table being made. In addition, if it is made for "completion" display prepared in the actuation machine to emit light when the transfer storage of the table on which modification was added is carried out at a storage preservation means like EEPROM, for a user, it can recognize that registration actuation was completed and will become what has good user-friendliness.

[0021] Drawing 1 shows the block circuit diagram of the massage machine concerning the above-mentioned example, and 10 is a control circuit and a drive control circuit where a temporary storage means and 2 are based on an actuation machine, 3 is based on directions of a control circuit 10 by a storage preservation means and 12, and 11 drives the massage device 4. moreover, drawing 2 -- an example of the actuation machine 2 -- being shown -- **** -- 21 in drawing -- a rate alteration switch and 22 -- whenever [strength] -- an alteration switch and 23 -- the directions switch of the existence of beat actuation, and the directions switch of a repeat and the switch for [24] registration in 25 -- it is -- 26 -- an automatic course -- the directions switch group of free medical treatment and 27 are the directions switches of a memory course.

[0022] Furthermore drawing 3 shows an example of the table of the program set up beforehand, and drawing 4 shows an example of the table when giving modification directions to the above-mentioned table.

[0023]

[Effect of the Invention] In a massage machine with a function automatic [which carries out sequential execution of the massage actuation in the procedure in this invention according to the program set up beforehand as mentioned above] — free medical treatment — Since it has the rate alteration switch to which the rate about all massage actuation is changed Or since it has the alteration switch whenever [strength / which changes whenever / strength / about all massage actuation] If an alteration switch is operated whenever [rate alteration-switch or strength], about all massage actuation of automatic free medical treatment Modification becomes effective whenever [rate modification or strength], and a favorite massage can be obtained by one actuation of an alteration switch about automatic course massage actuation.

[0024] and the modification value which should be equipped with a temporary-storage means memorize a rate modification value or the modification value of whenever [strength] until after massage actuation termination, and memorized to a temporary-storage means further — automatic [new to origin] — free medical treatment — if it has a storage preservation means generate and memorize a course, the course massage which consists of favorite massage actuation of a user can register, and it can reuse to next time.

[0025] moreover, automatic [which carries out / this invention / sequential execution in the massage actuation which includes a beat massage in a procedure according to the program set up beforehand] — free medical treatment — the case where beat massage actuation is not liked since it has the alteration switch which changes beat massage actuation into massage actuation of other type in the massage machine with a function — the massage actuation of other type — replacing — automatic — free medical treatment can be received.

[0026] automatic [which furthermore carries out sequential execution of the rolling massage actuation in the procedure according to the program to which this invention is set beforehand] — free medical treatment — in the massage machine with a function, it has the 4th description for having the repeat directions switch on which repeat actuation of the massage actuation including rolling massage actuation is made to perform. automatic [which can receive many favorite massage actuation] — free medical treatment can be received.

[0027] also in this case, all massage actuation including repeat actuation — automatic [new to origin] — free medical treatment — if it should have a storage preservation means to generate and memorize a course, the course massage which consists of favorite massage actuation of a user can be registered.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the block circuit diagram of this invention.

[Drawing 2] It is the front view of an actuation machine same as the above.

[Drawing 3] It is the explanatory view of the contents of the table same as the above.

[Drawing 4] It is the explanatory view of the contents of the table on which modification was added.

[Description of Notations]

2 Actuation Machine

10 Control Circuit

11 Storage Preservation Means

12 Temporary Storage Means